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# **Gender representation amongst editors-in-chiefs of physical therapy and physiotherapy journals: a cross-sectional study**

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## **Ethics Approval**

Ethics approval was not sought due to the publicly-available nature of the data collected, and the lack of human participants.

## **Transparency declarations**

We declare no competing interests.

## **Funding declarations**

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## **Abstract**

### *Introduction*

A balanced gender representation across the editor-in-chief positions of leading physical therapy and physiotherapy journals would increase the likelihood that the most competent individuals have been appointed to these positions. This study aimed to establish whether or not such a balance is currently in place across leading physical therapy and physiotherapy journals.

### *Methods*

The binary (male and female) gender of all editors-in-chief at leading physical therapy and physiotherapy journals was estimated using a name-to-gender inference platform, and the proportion of each gender calculated.

### *Results*

16 editors-in-chief across 12 physical therapy and physiotherapy journals were identified. Nine (56.25%) editors-in-chief were male and seven (43.75%) were female.

### *Discussion*

These results suggest that gender representation in editor-in-chief positions across leading physical therapy and physiotherapy journals is currently balanced. This interpretation is limited by the unknown gender participation difference in academic physical therapy and physiotherapy, the cross-sectional nature of the study, and its small (but complete) study population.

### *Impact statement*

Balanced gender representation across the editor-in-chief positions of leading physical therapy and physiotherapy journals would increase their ability to advance healthcare knowledge. This study suggests that, across leading journals in this field, such representation is currently in place, which therefore brings substantial benefit to the field and its patients.

## **Introduction**

### *Background*

Binary gender (male or female) representation is generally considered to be balanced if each gender constitutes 40-60% of a given population.<sup>1</sup> Various authors have claimed that women are often under-represented on the editorial boards of healthcare journals,<sup>2</sup> including in leading journals in the fields of anaesthetics,<sup>3</sup> rheumatology,<sup>1</sup> and radiology.<sup>4</sup> At least recently, no similar study of gender representation appears to have taken place with regards to editor-in-chief (or equivalent) positions of all leading physical therapy and physiotherapy journals.

### *Objectives*

This short study aimed to establish whether or not the gender representation of editor-in-chief positions across leading physical therapy and physiotherapy journals is currently balanced.

## **Methods**

All physical therapy and physiotherapy journals included in the [Web of Science Journal Citation Report's](#) Science Citation Index Expanded (SCIE), which are considered to be the most influential journals in their respective fields, were identified using the search terms 'physiotherapy' and 'physical therapy.' The website of each of these journals, specifically the page containing editorial board information, was visited and the binary gender (male or female) of each editor-in-chief (or equivalent position) was examined. In each case, gender was estimated using the name-to-gender inference platform [Gender API](#), and was cross-checked against personal pronouns and staff member photos displayed on institutional webpages, when available. The proportion of each gender was then calculated.

## **Results**

The relevant websites were visited and data were collected on 10 August 2022 (see Appendix). In total, eight physical therapy and four physiotherapy journals were included in the Web of Science Journal Citation Report's SCIE, which collectively

constituted 16 editors-in-chief (or equivalent positions). In total, nine (56.25%) were male, and seven (43.75%) were female (see Table 1). By applying the generally accepted definition of gender balance (each gender constituting 40-60% of a given population), these results suggest that editor-in-chief gender representation within physical therapy and physiotherapy journals is balanced.

Number of physical therapy journals		8
Number of physiotherapy journals		4
Number of editors-in-chief (or equivalent)		16
Editors-in-chief by gender	Male	9 (56.25%)
	Female	7 (43.75%)

Table 1. Summary of results

## Discussion

Balanced gender representation amongst healthcare journal editors-in-chief is important for one reason alone: since there is no intrinsic difference between the two genders' ability to excel in this role, an imbalanced gender representation would constitute an environment in which the most competent individuals are less likely to have become editors-in-chief, which would consequently harm the journals' original and primary objective to advance healthcare knowledge. While feminist ethics provide additional reasons in favour of balanced gender representation, the benefits afforded by virtue of these reasons would naturally emerge in the absence of top-down intervention (such as pre-determined quotas or gender ratio targets) if the awarding of editor-in-chief positions is exclusively determined by the applicants' merit and applies no importance to the immutable variable of gender. This is because, over the entire and extensive landscape of leading healthcare journals (thereby controlling for gender participation differences across the range of specialties), the total number of suitably competent males will be similar to that of suitably competent females.

Using the generally accepted definition of gender-balance (40-60% of a given population consisting of males, and 40% of the same population consisting of

females), this study's results suggest that editor-in-chief gender representation within physical therapy and physiotherapy journals is balanced.

However, these results do not control for gender participation differences within the physical therapy and physiotherapy professions. If editors-in-chief were selected purely on merit, editor-in-chief gender representation would resemble that of the academic branch of these professions. In the UK, female physiotherapists are over-represented (76.35% female and 23.64% male in 2018),<sup>5</sup> although this imbalance may soon become less pronounced, as intakes into UK physiotherapy programmes in 2019/20 were 59% female and 41% male.<sup>6</sup> Female physiotherapists are also over-represented in the United States (65% female and 35% male in 2020).<sup>7</sup> However, no data are publicly available regarding gender participation differences within global *academic* physical therapy and physiotherapy, which are required for this study's results to be meaningfully contextualised. As such, further research to establish the global gender participation differences within academic physical therapy and physiotherapy (since suitably qualified candidates from all countries are able to apply for editor-in-chief positions) is required for this study's results to be appropriately interpreted.

This crude analysis was also limited by its cross-sectional nature and relatively small (but complete) population of 12 journals. It is arguably unrealistic to expect a 40-60% gender-balance within a given population to be achieved at all times, especially in the context of a small population. Instead, further research is required to establish the trend of editor-in-chief gender representation over a period of time. Editorial boards are often renewed on three-yearly cycles, meaning that a 15-year analysis would capture the gender data of around five editors-in-chief, which would facilitate a more meaningful and contextualised interpretation of the collected data.

## **Conclusion**

While this study finds that editor-in-chief gender representation within physical therapy and physiotherapy journals is balanced, this finding does not control for gender participation differences within the academic branch of the physical therapy and physiotherapy profession globally, and is inherently restricted by its cross-sectional

design and small study population. Further research is required to correct for these limitations to allow for a more contextualised, and therefore meaningful, interpretation of the collected data.

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<sup>1</sup> PV Ovseiko, AP Afsar, ZZ Fazal, et al. Gender representation on editorial boards of rheumatology journals. *The Lancet Rheumatology* 04 August 2022. DOI: 10.1016/S2665-9913(22)00157-6

<sup>2</sup> A Pinho-Gomes, A Vassallo, K Thompson, et al. Representation of Women Among Editors in Chief of Leading Medical Journals. *JAMA Network Open*. 2021; 4(9): e2123026. DOI: 10.1001/jamanetworkopen.2021.23026

<sup>3</sup> K McMullen, MB Kraus, H Kosiorek, et al. Representation of Women as Editors in Anesthesiology Journals. *Anesthesia and Analgesia*. May 2022; 134(5): 956-963. DOI: 10.1213/ANE.0000000000005881.

<sup>4</sup> A Joshi, W Kong, S Yu, et al. Female Representation on Radiology Journal Editorial Boards Around the World: Geographical Differences and Temporal Trends. *Academic Radiology*. May 2022; 29(5): 755-762. DOI: 10.1016/j.acra.2020.07.004.

<sup>5</sup> Health and Care Professions Council. Number of Physiotherapists broken down by gender - February 2018. 21 February 2018. <https://www.hcpc-uk.org/resources/freedom-of-information-requests/2018/number-of-physiotherapists-broken-down-by-gender---february-2018/> [accessed 10 August 2022]

<sup>6</sup> N Beswetherick. The gender balance in physiotherapy. *Frontline* 01 May 2021. <https://www.csp.org.uk/frontline/article/gender-balance-physiotherapy> [accessed 10 August 2022]

<sup>7</sup> American Physical Therapy Association. APTA Physical Therapy Workforce Analysis. December 2020. <https://www.apta.org/contentassets/5997bfa5c8504df789fe4f1c01a717eb/apta-workforce-analysis-2020.pdf> [accessed 10 August 2022]